**Amendment to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A circuit ~~for determining~~ **to determine** the polarity of an on hook voltage between the tip and ring terminals of a telephone, said circuit comprising:

a charge storage device to store charge for a first time period in response to a voltage ~~presented~~ across the tip and ring terminals of a telephone while said telephone is in the on hook state;

a switch to cause the charge storage device to periodically discharge for a second time period, the second time period being less that the first time period; and

a ~~latch~~ **flip-flop** to capture a reversal of polarity of said voltage.

2. (Previously Presented) The circuit of claim 1 wherein said first time period is approximately 2.5 milliseconds and wherein said second time period is approximately 2 microseconds.

3. (Previously Presented) The circuit of claim 1 wherein the charge storage device is a capacitor and the discharge from said capacitor is used to generate current through an optocoupler.

4. (Canceled)

5. (Currently Amended) The circuit of claim 1 comprising two of said ~~latches~~ **flip-flops**, two of said charge storage devices, and two of said optocouplers, one of each of the foregoing elements ~~being arranged~~ **configured** to detect positive voltage changes, and one of each of the foregoing ~~being arranged~~ **elements configured** to detect negative voltage changes.

6. (Currently Amended) A method of detecting polarity changes in a voltage ~~present~~ across the tip and ring terminals of a telephone network, the method comprising:

repeatedly charging, for a first period, a charge storage device with the voltage ~~presented~~ across the tip and ring terminals;

periodically discharging the stored charge for a second period;

~~latching~~ **capturing, with a flip-flop,** information conveyed by the discharge to ~~ascertain~~ **extract** data conveyed by **[[a]] the** change in polarity of the voltage ~~presented~~ across the tip and ring terminals.

7. (Previously Presented) The method of claim 6 wherein said second period is shorter than said first period.

8. (Previously Presented) The method of claim 7 wherein the first period is approximately 3 milliseconds and the second period is approximately 2 microseconds.

9. (Currently Amended) An apparatus to detect information conveyed by changes in polarity of a signal, said apparatus comprising:

means for periodically charging a capacitor for a first time period,

means for periodically discharging said capacitor for a second time period,

means for driving a current through an optical coupler in response to said discharge, and

a ~~latch~~ **flip-flop** configured to measure an electrical signal produced by said discharge, and to ~~latch~~ **store** that state for later use in decoding information.

10. (Previously Presented) The apparatus of claim 9 wherein said capacitor is approximately 500 picofarads.

11. (Previously Presented) The apparatus of claim 10 wherein said first and second time periods are 3 milliseconds and 2 microseconds respectively.

12. (Previously Presented) The apparatus of claim 10 connected to tip and ring terminals of a telephone network.

13. (Previously Presented) The apparatus of claim 12 further comprising at least one zener diode connected between said tip and ring terminals.

14. (Currently Amended) The apparatus of claim 10 further comprising an OR logic gate connected to a signal input to said ~~latch~~ **flip-flop** to indicate ~~when~~ **if** said signal is valid.

15. (Previously Presented) The apparatus of claim 14 wherein said optical coupler is connected in series with a resistor.

16. (Previously Presented) The apparatus of claim 15 wherein the resistor is approximately 10 kilo ohm.